Data Validation Report

TDD No.	09–04-01-0011
PAN:	001275.0440.01TA
Site:	El Dorado Hills, California
Laboratory:	Asbestos TEM Laboratories, Inc.
Reviewer:	Denise A. Shepperd, Trillium, Inc.
Date:	June 29, 2005

I.   Case Summary

SAMPLE INFORMATION:

Samples IDs: NYB-S03-100804; NYB-SS04-100804; NYB-SS03-100804; NYB-SS02-100804; NYB-S104-100804; NYB-S10-100804; NYB-S09-100804; NYB-S08-100804; NYB-S07-100804; NYB-S06-100804; NYB-SS05-100804; NYB-S04-100804; NYB-SS104-100804; CPS-CS01-100804; CPS-S101-100804; CPS-S07-100804; CPS-S06-100804; CPS-S05-100804; CPS-S04-100804; CPS-S03-100804; CPS-S02-100804; NYB-S05-100804; NYT-SC1-100804; NYT-SF3-100804; NYT-SF2-100804; NYT-SF1-100804; NYT-S1E1-100804; NYT-SE3-100804; NYT-SE2-100804; NYT-SE1-100804; NYT-SD3-100804; NYT-SD2-100804; NYB-SS06-100804; NYT-SC3-100804; NYT-SG1-100804; NYT-SB2-100804; NYT-SB1-100804; NYT-SA3-100804; NYT-SA2-100804; NYT-SA1-100804; NYB-CSS01-100804; NYB-CS01-100804; NFB-SS06-100804; NYB-SS07-100804; NYT-SD1-100804; SFB-SS07-100804; CPS-S01-100804; NFB-S07-100804; NFB-S06-100804; NFB-S05-100804; NFB-S04-100804; NFB-S03-100804; NFB-S02-100804; NFB-S01-100804; NFB-SS07-100804; SFB-SS107-100804; NYB-S02-100804; SFB-SS06-100804

Matrix:	58 Soil Samples
Analysis:	Asbestos by Polarized Light Microscopy
Method:	NIOSH 9002
Collection Date:	October 8, 2004
Sample Receipt Date:	April 15, 2005
Analysis Dates:	April 20 through 22, 2005 and May 2, 2005

FIELD QC:

Trip Blanks (TB):	None
Field Blanks (FB):	None
Equipment Blanks (EB):	None
Background Samples (BG):	None
Field Duplicates :	NYB-S104-100804 and NYB-S04-100804; NYB-SS104-100804 and NYB-SS04-100804; NYT-S1E1-100804 and NYT-SE1-100804; CPS-S101-100804 and CPS-S01-100804; and SFB-SS107-100804 and SFB-SS07-100804

TABLES:

	1A:	Analytical Results with Qualifications
	1B:	Data Qualifier Definitions for Inorganic Data Review

SAMPLING ISSUES:

Three chain of custody records received by the laboratory with the delivery of the samples included all of the samples identified in this data set. According to these records, the samples were collected on 10/8/04 but were not relinquished until 12/7/04. No indication is made of the disposition of the samples during this period of time and from the documentation provided, the custodian of the samples during this time cannot be determined. A second set of "relinquished and received" signatures appear for "all/return" of the samples; samples were relinquished on 3/11/05 and received on 4/12/05. There is no indication of the disposition of the samples during the month between these dates. A third set of relinquished and received signatures appears, both for the date 4/15/05. There is no indication what this transfer represented on the COC records, however, the laboratory documentation indicates that the samples were received on 4/15/05 from FedEx. This would indicate that FedEx delivered the sample on the same day they were shipped. COC records should provide sufficient information (sampler initials, affiliations for all parties, and/or reasons for transfer). These documents should support every transfer of the samples from the day of collection to the day of return or disposal. The COC documents included with these samples do not fulfill this purpose.

VALIDATION PARAMETERS AND COMMENTS:

I.   Holding Times, Preservation and Sample Integrity

This parameter is evaluated to ensure that sample custody is documented from collection through analysis, samples are analyzed within the recommended holding time, and that no alteration in sample content has occurred during sample shipment, handling, and storage.

There is no established holding time or storage condition for asbestos samples.

According to the laboratory log-in report, all samples were received in excellent condition from FedEx. No airbill number or copy of the applicable airbill was included in the data package.

II.   Calibration

The analyses of materials of known content ensures that identification and quantitation of analytes will be accurate for all samples. Review of the documentation provided for appropriate calibration determines whether or not the analytical results reported by the laboratory are valid and supported by the data.

Asbestos TEM Laboratories, Inc., participates in NVLAP. Documentation of the laboratory's current certification for EPA Method 600/M4-82-020 and "relevant requirements of ISO 9002:1994," which include PLM analyses for solid materials, was included in the data package. The certificate is effective through the end of June, 2005. Should additional information regarding the laboratory's ability to accurately identify and quantify asbestos be desired, results and supporting data for samples from this PE program should be obtained from the laboratory.

Logbook pages including daily microscope checks for dates 4/25/05, 4/26/05, 4/27/05, 4/28/05, 5/3/05, and 5/4/05 were included. Analyses of the samples in this data set were performed on 4/21/05 through 4/22/05, and 5/2/05. Microscope checks, which are required on each day before samples are analyzed, were not documented for the days on which the samples in this data set were analyzed. Monthly dispersive oil calibration documentation was

provided on a separate logbook page. According to the documentation the applicable calibration was performed on 4/12/05.

Two performance evaluation samples, prepared for this project by RTI, were submitted to the laboratory. The PE samples were analyzed on 3/4/05. No documentation of microscope or other QC checks was included with the PE sample data. Two sets of raw data were included, representing identification and visual estimation performed by two different analysts. The two PE samples were generated by RTI at two different asbestos concentrations. The first sample contained tremolite and chrysotile asbestos, each at 0.5% (1% total asbestos). The second contained each of these two asbestos types at 2% (4% total asbestos). The laboratory's results for total asbestos for these two samples were 5% and 14%, respectively. These are the only reference materials presented with this data set. The results the laboratory reported for these PEs are greater than three to five times the prepared concentrations, indicating the potential for high bias in positive results. Results for all of the samples in this data set were qualified as estimated (J) on this basis.

III. Blanks

Sample matrices known to be devoid of the analytes of interest (method blanks) are prepared and analyzed with each analytical batch. Evaluation of this parameter ensures that contamination introduced during preparation and analyses is not attributed to the field samples. Other blanks may be generated in the field or laboratory to ensure that no contamination is introduced during sampling and/or storage.

A total of 16 laboratory blanks (all included in data set 049488) were prepared and analyzed with the sample batches associated with this data set (049351, 049352, 049487, and 049488)and represented both the drying and grinding steps of sample preparation. No asbestos structures were identified in any of these sixteen blanks. Two of these laboratory blanks, LAB-BL09-101104 and LAB-BL13-101104 were analyzed as laboratory duplicate pairs. Results for the duplicates in both cases were ND and <1%. Because results for all of the field samples were previously qualified as estimated based on the high bias observed in the reference material, no additional action was taken on the basis of blank results.

No field-generated blanks were included with this data set.

IV. Spiked Samples

The analytes of interest are added in known concentrations to like-matrix blanks or authentic field samples before preparation. This parameter is evaluated in order to assess the laboratory's ability to preserve and recover the compounds of interest.

See Section II for a discussion of the PE (spiked) samples submitted with this data set.

No other spiked analyses were performed with this sample set.

V. Duplicate/Replicate Samples

Results for duplicate/replicate samples are evaluated to assess the laboratory's precision for the analytes of interest in the applicable sample matrix.

Five field duplicate pairs (NYB-S104-100804 and NYB-S04-100804; NYB-SS104-100804 and NYB-SS04-100804; NYT-S1E1-100804 and NYT-SE1-100804; CPS-S101-100804 and CPS-S01-100804; and SFB-SS107-100804 and SFB-SS07-100804) were included with this data set. Results for two of the pairs (NYB-SS04-100804 and NYB-SS104-100804 and SFB-SS07-100804 and SFB-SS107-100804) showed excellent agreement. For the other three duplicate pairs one sample was reported to contain less than one percent (<1%) and the other was

reported to contain one to five percent (1-5%). Results for these samples were previously qualified as estimated based on the high bias observed in the PE samples and no further action was taken by the validator on the basis of duplicate sample results.

The laboratory prepared and analyzed 14 laboratory duplicate sample pairs. Of these all but one pair had identical results. The remaining duplicate pair, SFB-SS06-100804 and its duplicate, had results of ND and < 1%. The laboratory reported the higher of the two results, which is appropriate for these analyses. No action was warranted by the validator.

VI.   Identification

Identification of asbestos is dependent on sample preparation techniques, analyst training, instrument operation, and data interpretation. Comparison with results from known standards is used to evaluate the accuracy of the structure identification for field samples.

Chrysotile and tremolite asbestos were correctly identified in the PE samples (see Section II). Only actinolite was identified in the field samples. Identification was based on the various optical properties of the asbestos fibers and was correctly performed, based on review of the raw data. Values for the optical properties recorded by the laboratory on the PLM data sheets were identical for all samples in which this asbestos type was identified.

The laboratory passed the criteria for NVLAP, based on the documentation provided, however, no actual sample results or raw data for the analyses of NVLAP PE samples were provided.

Analysis of the project PE samples was performed by an analyst with the initials DV and a second whose signature was illegible. Analyses of the field samples were performed by analysts with the initials SF and MB. It is recommended that documentation be included in the data packages for each sample batch that support the correct identification of asbestos by the analysts who perform the analyses on the field samples.

VII.   Visual Estimation and Reported Detection Limits

Raw data documentation is reviewed to ensure that all reported results and detection limits are correctly calculated, accurately reported, and supported by the raw data.

The laboratory's results for the two PE samples provided in association with this project were within the acceptance ranges suggested by RTI, however, a consistent tendency toward over estimation was observed . RTIs suggested range for the first PE (0.5% each of tremolite and chrysotile) were 0.1 to 5% and 0.1 to 4%, respectively. The laboratory found 2% tremolite and 3% chrysotile. If reported in the same manner as the field samples, this would result in a reported total asbestos content of 1-5%. RTI's suggested range for the second PE (2% each of tremolite and chrysotile) was >1 to10% for both asbestos types. The laboratory reported results of 6% tremolite and 8% chrysotile, a total asbestos content of 14%.

Field sample results for PLM analyses associated with this project were reported by the laboratory as ND (not detected), <1%, or 1-5% total asbestos by weight. None of the field samples were reported with concentrations higher than the range 1-5%. Both of the PE sample true concentrations fell within these ranges. In the case of both PE samples, the laboratory's reported values show high bias, exceeding the true values by factors of three to five. Based on the indications of high bias in the only reference material analyzed and professional judgement, the validator qualified all positive sample results as estimated (J). The data user is cautioned that these results are likely biased high.

VIII. System Performance

This parameter is evaluated to ensure that the laboratory analytical systems were functioning properly at the time of analyses and that methodology appropriate to the analyses were followed.

The analytical system appears to have been working satisfactorily at the time of these analyses, based on the documentation provided in this data package shipment.

IX. Documentation

Data and documentation completeness is critical in providing support for the reported results. Problems encountered with the nature or quality of the data package documentation are addressed.

The COC documentation included in the data package does not adequately support the custody of the samples in the data set.

Documentation of microscope checks should be included for every day on which samples are analyzed.

COMMENTS:

A. Based on the indications of high bias in the only reference material analyzed in association with this data set, and on professional judgement, the validator qualified all positive sample results for these samples as estimated (J). The data user is cautioned that these results are likely biased high.

This report was prepared according to the specifications of the analytical method, NIOSH 9002, Asbestos (bulk) by PLM, the document "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," 10/99, and Trillium, Inc.'s SOP No. 0497-06A, for Validation of Analytical Data: Inorganic Analytes.

ANALYTICAL RESULTS
TABLE 1A

TDD No.	**09-04-01-0011**
PAN:	**001275.0440.01.TA**
Site:	**El Dorado Hills, California**
Lab:	**Asbestos TEM Laboratories, Inc.**
Reviwer:	**Denise A. Shepperd, Trillium, Inc.**
Date:	**June 29, 2005**

**Analysis Type: Soil Samples
                                    for Asbestos**

Results as Percentage Asbestos

							D2							D1		
Station Location	NYB-S03-100804			NYB-SS04-100804			NYB-SS03-100804			NYB-SS02-100804			NYB-S104-100804		
Sample Lab I.D.	741-00023-001			741-00023-002			741-00023-003			741-00023-004			741-00023-005		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Percent Asbestos	< 1%	J	A	1-5%	J	A	1-5%	J	A	1-5%	J	A	<1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	NYB-S10-100804			NYB-S09-100804			NYB-S08-100804			NYB-S07-100804			NYB-S06-100804		
Sample Lab I.D.	741-00023-006			741-00023-007			741-00023-008			741-00023-009			741-00023-010		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Percent Asbestos	< 1%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A	1-5%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

				D1			D2						D4			
Station Location	NYB-SS05-100804			NYB-S04-100804			NYB-SS104-100804			CPS-CS01-100804			CPS-S101-100804		
Sample Lab I.D.	741-00023-011			741-00023-012			741-00023-013			741-00023-014			741-00023-015		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Percent Asbestos	1-5%	J	A	1-5%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	CPS-S07-100804			CPS-S06-100804			CPS-S05-100804			CPS-S04-100804			CPS-S03-100804		
Sample Lab I.D.	741-00023-016			741-00023-017			741-00023-018			741-00023-019			741-00023-020		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**	**Result**	**Val**	**Com**
Percent Asbestos	< 1%	J	A	< 1%	J	A	< 1%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Val-Validity Refer to Data Qualifiers in Table 1B.   D1, D2, etc. - Field Duplicate Pairs

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

TDD No.	**09-04-01-0011**
PAN:	**001275.0440.01.TA**
Site:	**El Dorado Hills, California**
Lab:	**Asbestos TEM Laboratories, Inc.**
Reviwer:	**Denise A. Shepperd, Trillium, Inc.**
Date:	**June 29, 2005**

Analysis Type: **Soil Samples for Asbestos**

Results as Percentage Asbestos

Station Location	CPS-S02-100804			NYB-S05-100804			NYT-SC1-100804			CPS-SF3-100804			NYT-SF2-100804		
Sample Lab I.D.	741-00023-021			741-00023-022			741-00023-023			741-00023-024			741-00023-025		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	1-5%	J	A	< 1%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	NYT-SF1-100804			D3 NYT-S1E1-100804			NYT-SE3-100804			NYT-SE2-100804			D3 NYT-SE1-100804		
Sample Lab I.D.	741-00023-026			741-00023-027			741-00023-028			741-00023-029			741-00023-030		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	< 1%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	NYT-SD3-100804			NYT-SD2-100804			NYB-SS06-100804			NYT-SC3-100804			NYT-SG1-100804		
Sample Lab I.D.	741-00023-031			741-00023-032			741-00023-033			741-00023-034			741-00023-035		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	< 1%	J	A	1-5%	J	A	1-5%	J	A	1-5%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	NYT-SB2-100804			NYT-SB1-100804			NYT-SA3-100804			NYT-SA2-100804			NYT-SA1-100804		
Sample Lab I.D.	741-00023-036			741-00023-037			741-00023-038			741-00023-039			741-00023-040		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	1-5%	J	A	1-5%	J	A	1-5%	J	A	1-5%	J	A	1-5%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Val-Validity Refer to Data Qualifiers in Table 1B.

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

D1, D2, etc. - Field Duplicate Pairs

TDD No.	**09-04-01-0011**	
PAN:	**001275.0440.01.TA**	
Site:	**El Dorado Hills, California**	
Lab:	**Asbestos TEM Laboratories, Inc.**	**Analysis Type:** **Soil Samples**
Reviwer:	**Denise A. Shepperd, Trillium, Inc.**	**for Asbestos**
Date:	**June 29, 2005**	

Results as Percentage Asbestos

Station Location	NYB-CSS01-100804			NYB-CS01-100804			NYB-SS06-100804			NYT-SS07-100804			NYT-SD1-100804		
Sample Lab I.D.	741-00023-041			741-00023-042			741-00023-043			741-00023-044			741-00023-045		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	< 1%	J	A	< 1%	J	A	1-5%	J	A	1-5%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	SFB-SS07-100804			D4 CPS-S01-100804			NFB-S07-100804			NFB-S06-100804			NFB-S05-100804		
Sample Lab I.D.	741-00023-046			741-00023-047			741-00023-048			741-00023-049			741-00023-050		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	< 1%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	NFB-S04-100804			NFB-S03-100804			NFB-S02-100804			NFB-S01-100804			D5 NFB-SS07-100804		
Sample Lab I.D.	741-00023-051			741-00023-052			741-00023-053			741-00023-054			741-00023-055		
Date of Collection	10/8/04			10/8/04			10/8/04			10/8/04			10/8/04		
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	1-5%	J	A	1-5%	J	A	< 1%	J	A	< 1%	J	A	< 1%	J	A
Type	Actinolite			Actinolite			Actinolite			Actinolite			Actinolite		

Station Location	D5 SFB-SS107-100804			NYB-S02-100804			SFB-SS06-100804								
Sample Lab I.D.	741-00023-056			741-00023-057			741-00023-058								
Date of Collection	10/8/04			10/8/04			10/8/04								
Analyte	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Percent Asbestos	< 1%	J	A	1-5%	J	A	< 1%	J	A						
Type	Actinolite			Actinolite			Actinolite								

Val-Validity Refer to Data Qualifiers in Table 1B.   D1, D2, etc. - Field Duplicate Pairs

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

TABLE 1B

DATA QUALIFIER DEFINITIONS FOR INORGANIC DATA REVIEW

The definitions of the following qualifiers are prepared in accordance with the document, "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review," 2/94.

U   The analyte was analyzed for, but was not detected above the level of the reported value. The reported value is either the sample quantitation limit or the sample detection limit.

L   Indicates results which fall between the sample detection limit and the CRDL. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.

J   The associated value is an estimated quantity. The analyte was analyzed for and was positively identified, but the reported numerical value may not be consistent with the amount actually present in the environmental sample.

R   The data are unusable. The analyte was analyzed for, but the presence or absence of the analyte cannot be verified.

UJ   A combination of the "U" and "J" qualifier. The analyte was analyzed for but was not detected. The reported value is an estimate and may be inaccurate or imprecise.

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